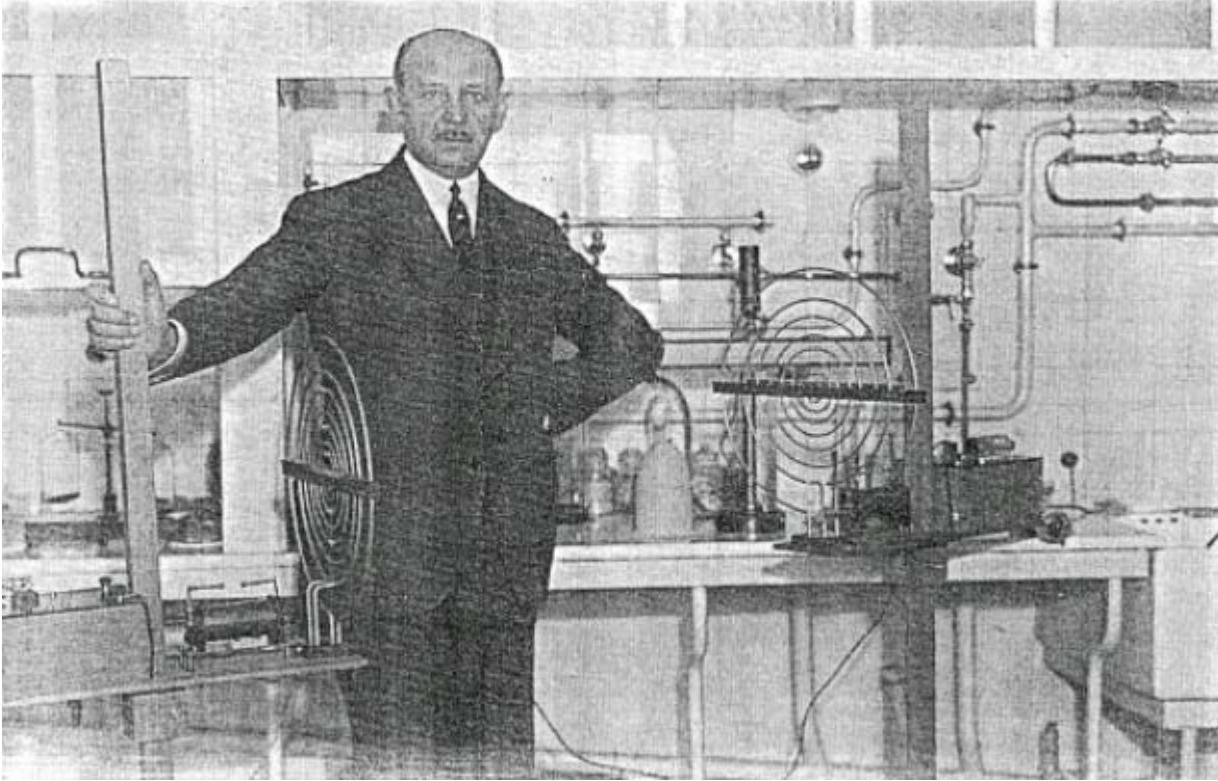
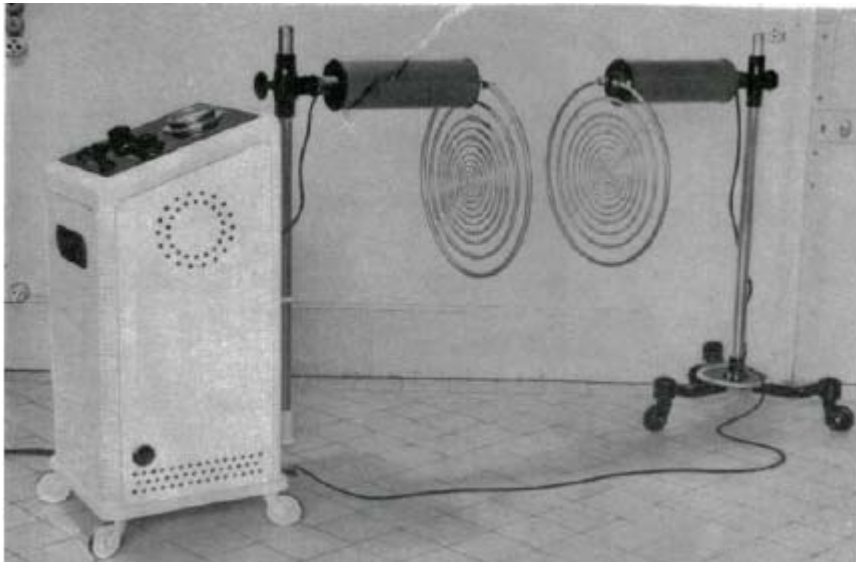


VISIT...

LANZAROTE
Caliente.COM



Note: much of the background information, and photos regarding the original Lakhovsky Multi-Wave Oscillator (**MWO**) was taken from a recent engineering analysis of three original Multi-Wave Oscillators that were discovered. That information was obtained from this link, in the form of a pdf that can be purchased: <http://users.skynet.be/Lakhovsky/index.htm>
(Note: **Eric Dollard** has no association with this site; it is merely where some of the original equipment information was obtained)



Theory of Health Benefits

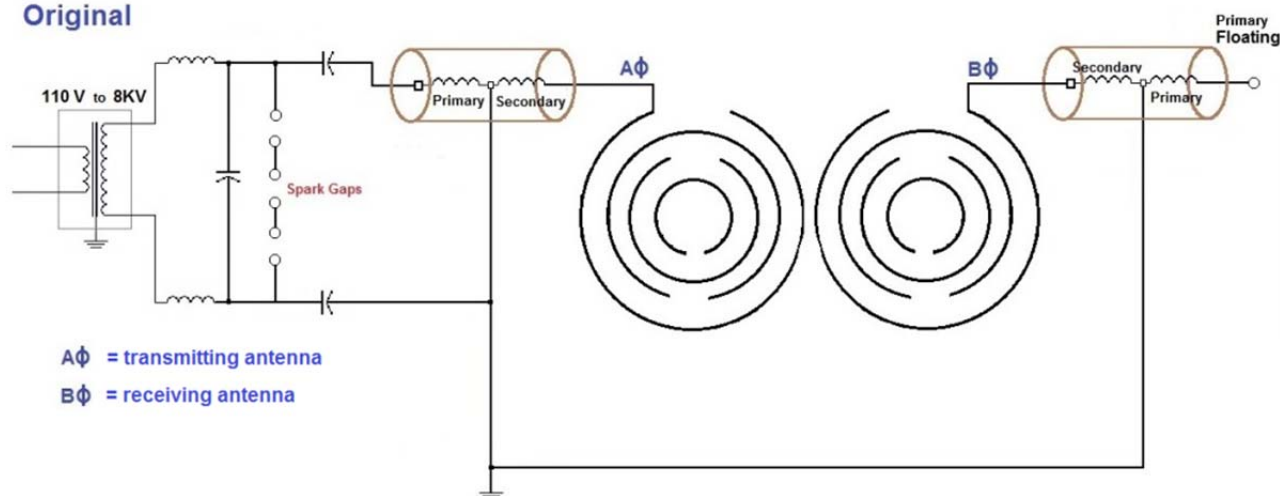
The basis behind Lakhovsky's design was the **MWO** helps regenerate living cells in the body. In Lakhovsky's book "The Secret of Life", Lakhovsky compares a cell to an oscillating electrical circuit. A circuit is said to be able to oscillate if it contains an inductor, to store a magnetic field, a condenser, to store charge, and a conductor to connect the two elements. Lakhovsky claimed each individual cell had self capacitance and self inductance, thus being capable of oscillating. The nucleus of the cell is composed of twisted filaments, mitochondria, and chromosomes. These pieces are constructed of

conductive elements(read: carbon), forming a sort of inductor. These inductors then are covered with an insulating material: cholesterol, plastin, and other dielectric substances. Thus each tubular element has both self capacity and self inductivity. Furthermore these are suspended within the electrically conductive blood(which contains salts as an electrolyte). These form the individual components to complete the oscillating circuit of the cell. This oscillating cell must also have a natural, or resonant frequency. Not all cells in the body are the same, so different cells will have different tuned resonant frequencies. The theory behind the **MWO** is that it will produce a multitude of resonant frequencies, a frequency envelope if you will, and then each cell in the body will absorb its resonant frequency out of the envelope, which powers up the cell and restores it to health. The cell then can be compared to a radio receiver. Thus the **MWO** makes every cell in your body vibrate to its natural resonant frequency, killing off any disease.

Original Equipment

There seems to be different versions of the original Lakhovsky **MWO**. Though all operating on the same principle, they have slightly different implementations. The pdf noted above documented three different original Lakhovsky Multi-Wave Oscillators. The differences in the equipment are in the antenna construction, and slight difference in the circuit schematics: Below is the basic original schematic:

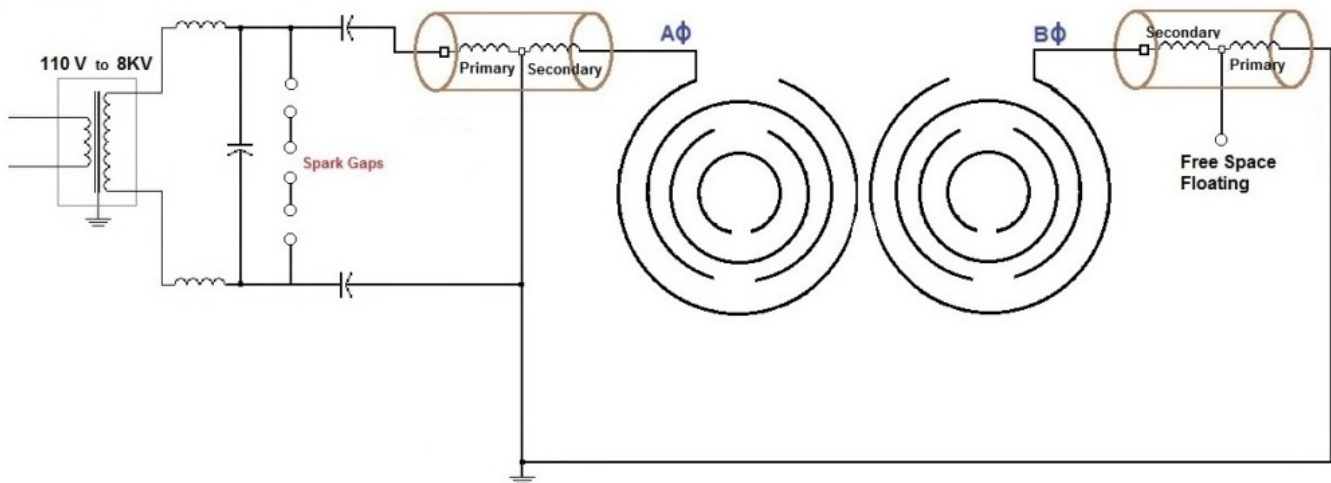
Original



The H.V. transformer provides 8 kilovolts to the circuit. Connected to opposite sides of the HV supply, the two antennas are electrically 180 degrees out of phase with each other. This is important. Inside the brown cylinders are transformers to step up the voltage even higher, but operate not as a regular transformer, but more like a Tesla Transformer, a transmission line. With a high voltage potential between the transmitting and receiving antenna, and the antennas being 180 degrees out of phase, a displacement current flows in between the two antenna. This circuit is asymmetrical, that is, it is not balanced. When **Eric** first examined the schematic, he didn't believe it was original, he guessed it was what "somebody else" thought Lakhovsky was doing. After careful examination of the pictures of the original equipment, **Eric** came to conclude this is indeed the schematic of Lakhovsky's equipment. **Eric** referred to this circuit as "driving with the brakes on, but only on one side of the car."

There is also a second schematic, used in one of the original units which is connected slightly differently:

Original #2



Circuit operation

The receiving antenna is tied to ground, with only the transmitting side being energized(hot). This creates a lopsided situation. Furthermore there really is no “ground” with this system. With the receiving coil connected directly to ground, it lights up the whole neutral circuit of the neighborhood with each impulse from the spark gap. It is basically creating an antenna out of the local neutral wiring. Lots of RF interference! Not good! **Eric** provided me with the following metaphor regarding this setup:

“It would be like connecting a wire to one phase of the breaker box in your house, and then connecting this wire directly to a ground rod that has been pounded into the earth.”

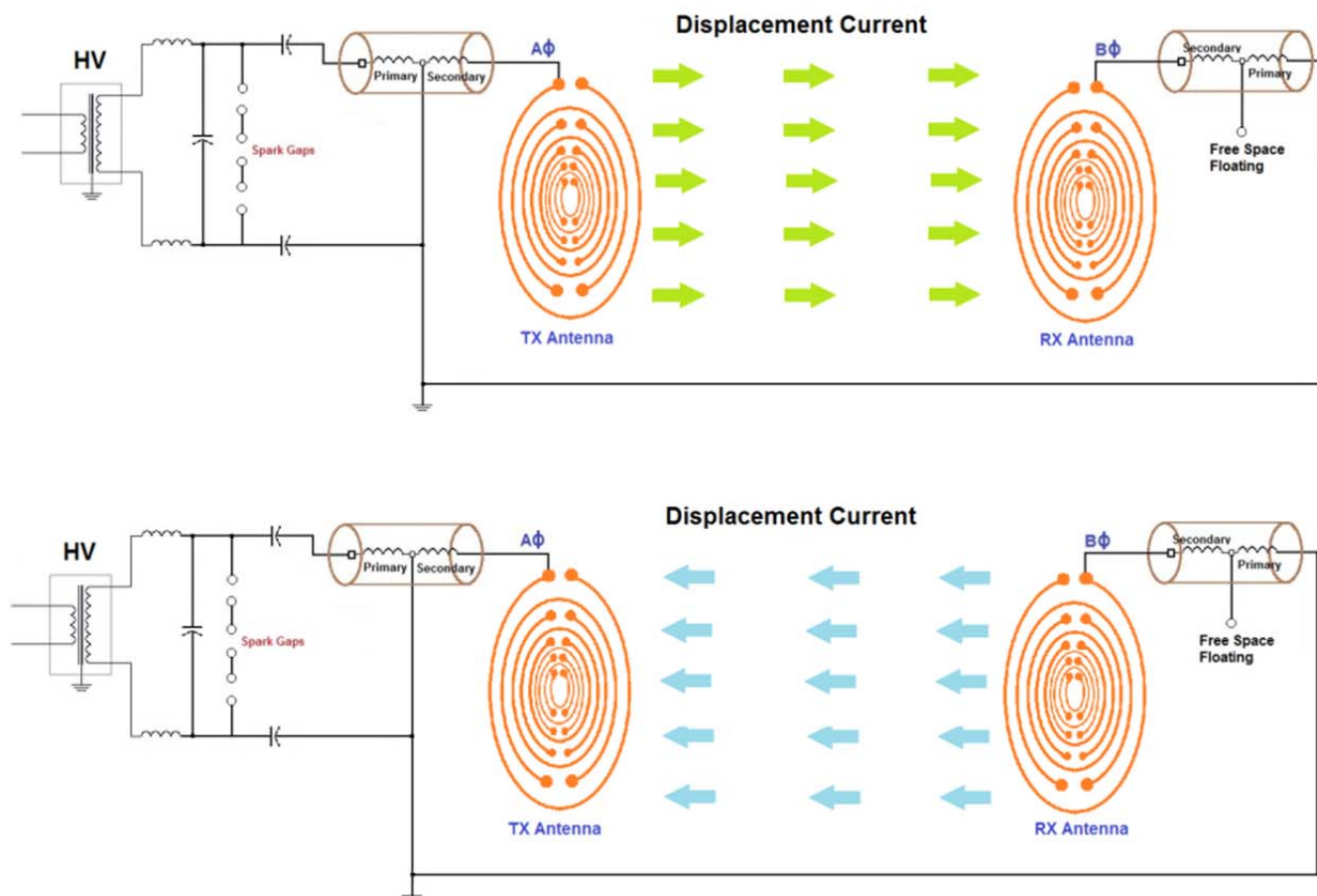
Eric also gave me the following quote regarding the effects of having the system grounded in this manner:

“It’s more like an electromagnetic terrorist device than a healing tool.”

Also interesting to note is the receiving antenna primary winding serves no real purpose, it only has one end connected to ground, otherwise it is just floating in space. **Eric** guesses it was put there just to comply with requirements for a Tesla coil, to have the same mass of primary and secondary. However in the pdf analysis, the researchers made it clear the coils were not operating in a “Tesla mode”.

Displacement Current

Before moving on to how the antennas function, let’s take a simplified look at what is happening between the two antennas. They function similar to a capacitor. A high voltage potential exists between the two antennas with an insulator (the air) in the middle, so a displacement current flows. The direction of the displacement current changes, due to the changing polarity placed on the transmitting antenna (the receiving antenna always stays at ground potential). The displacement current flows back and forth, back and forth, as represented pictorially here:



It must be noted that the displacement current is NOT a continuous wave. We are dealing with impulse currents here. The displacement current flows each time the spark gap is triggered.

Triggering Circuit

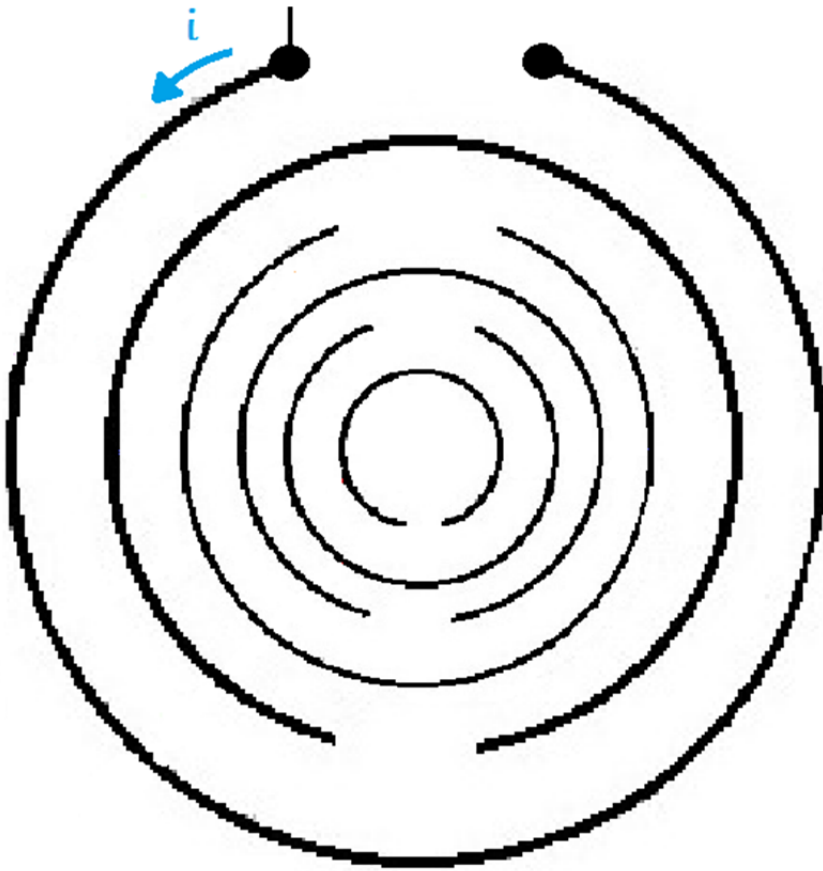
The triggering circuit is key to providing the proper resonant frequencies. However there are a few problems in Lakhovsky's original circuit, preventing harmonic oscillations. Looking at the schematic, we have 3 individual resonant circuits on the primary side, each operating at a different frequency:

circuit contributes to “noise” in the desired frequency. Herein lies a problem: without a stable driving frequency, how can specific harmonic wavelengths be induced in the antenna rings?

Oscillations in Ring Antennas

Lakhovsky's vision was more than just creating oscillating displacement currents to flow through the body. His antenna design was intended to create the multiple frequencies (TEM) that are thought to be beneficial to the cells. To create the different frequencies, each ring was supposed to resonate at its own unique wavelength, thus the different sized rings. The outer most ring was triggered, and then current flowing in the outer ring would couple through mutual induction with the inner rings. The problem is, in the way the original is setup, very little current can flow into the antenna. **Eric** estimates only about 1% of the power in the primary circuit can flow into the outer ring and couple with the inner rings. Here is why:

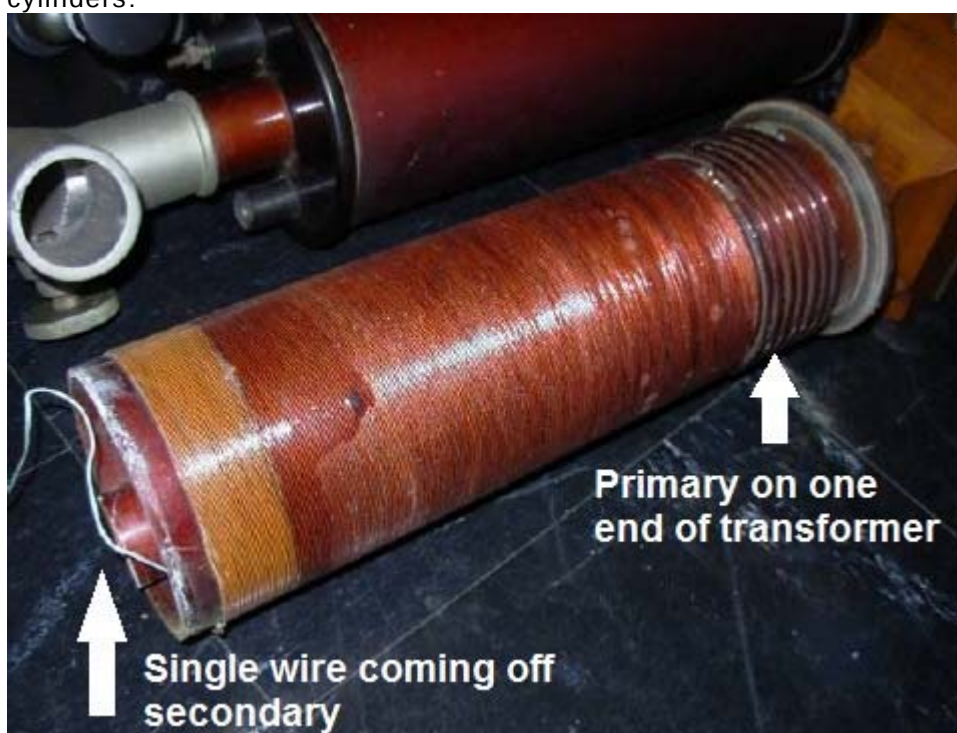
The outer ring is only connected on one side, which is not a complete circuit path in and of itself. Therefore the outer ring will function only as an antenna, or transmission line. The length of the outer-most ring has both self capacity and self induction, so a small current can flow around it:



However the current will become less and less as it couples with the inner rings, which doesn't lend itself to producing strong signals of varying frequencies. This is why **Eric** originally didn't believe this is how the original was configured. He reasoned if current was to be induced into the center rings, the outer antenna could not be only one wire connected. There must be a magnemotive force around the outer ring in order to induce an EMF into the inner rings.. Looking at some of the original pictures, we can see the antennas were in fact one wire connected. It is also evident in the original schematic. First let's examine the typical **MWO** setup:



We have the power supply, and the transmitting and receiving antenna. Note the brown cylinders the antennas are attached to, these contain the "Tesla Coils". Here is a picture of the inside of one of the cylinders:



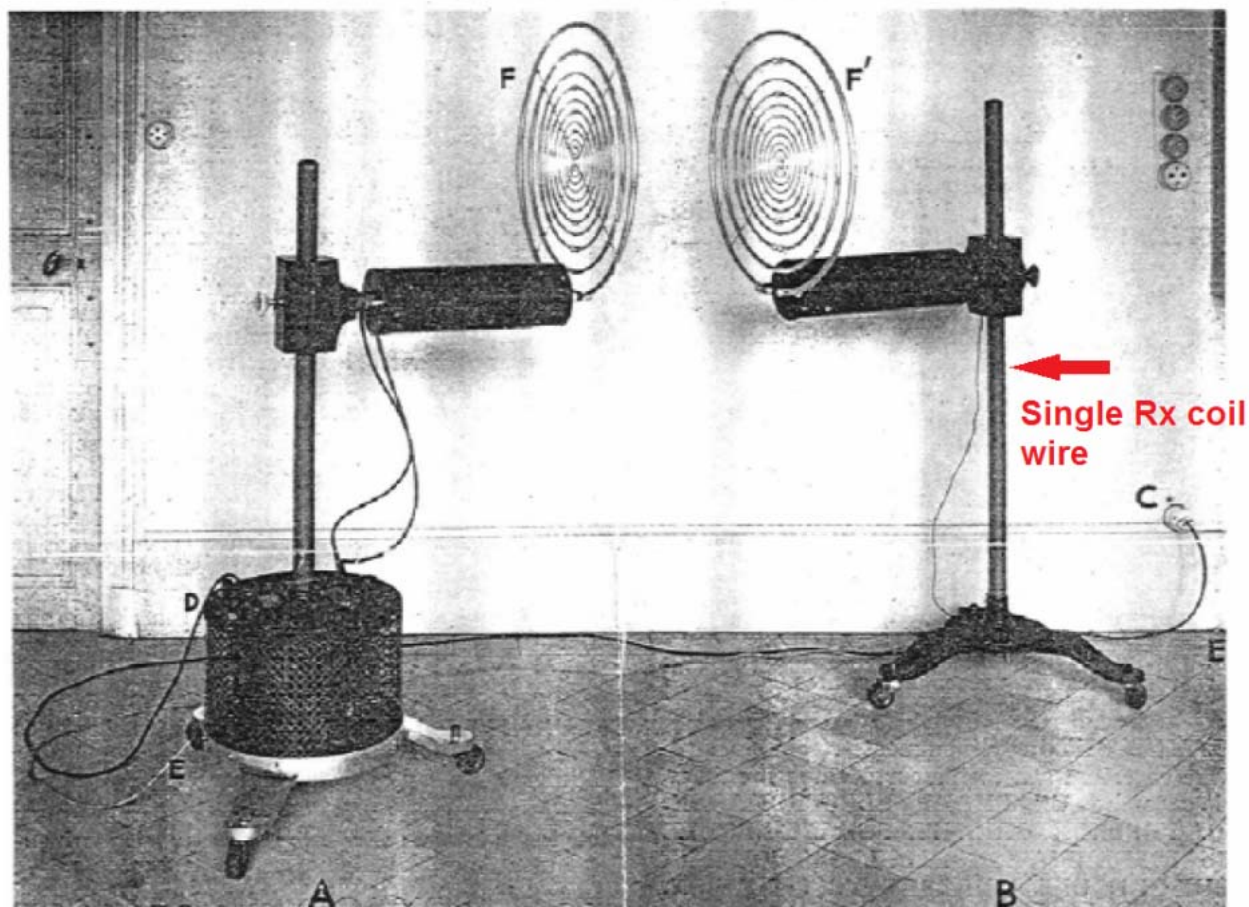
A couple things to note in this photograph: First the primary is on one side of the secondary, this in itself proves this is not a "balanced" setup. If it were balanced the primary would be in the center of the secondary. Secondly, there is only one wire going from the secondary to the antenna, again showing it is only in one wire operation.

Another reason **Eric** at first didn't believe this to be original equipment is the receiving antenna is only connected to the power supply by one wire (also evident in the schematic). This one wire serves as the ground for the receiving antenna, putting it at ground potential. The problem is, the transmitting antenna will not selectively transmit to the receiving antenna! It will transmit to anything metallic in the room that is at ground potential! Another seemingly flaw in the original design. Here are some more pictures of original equipment, noting only one wire returning from the receiving coil:



OSCILLATEUR LAKHOVSKY

A ONDES MULTIPLES



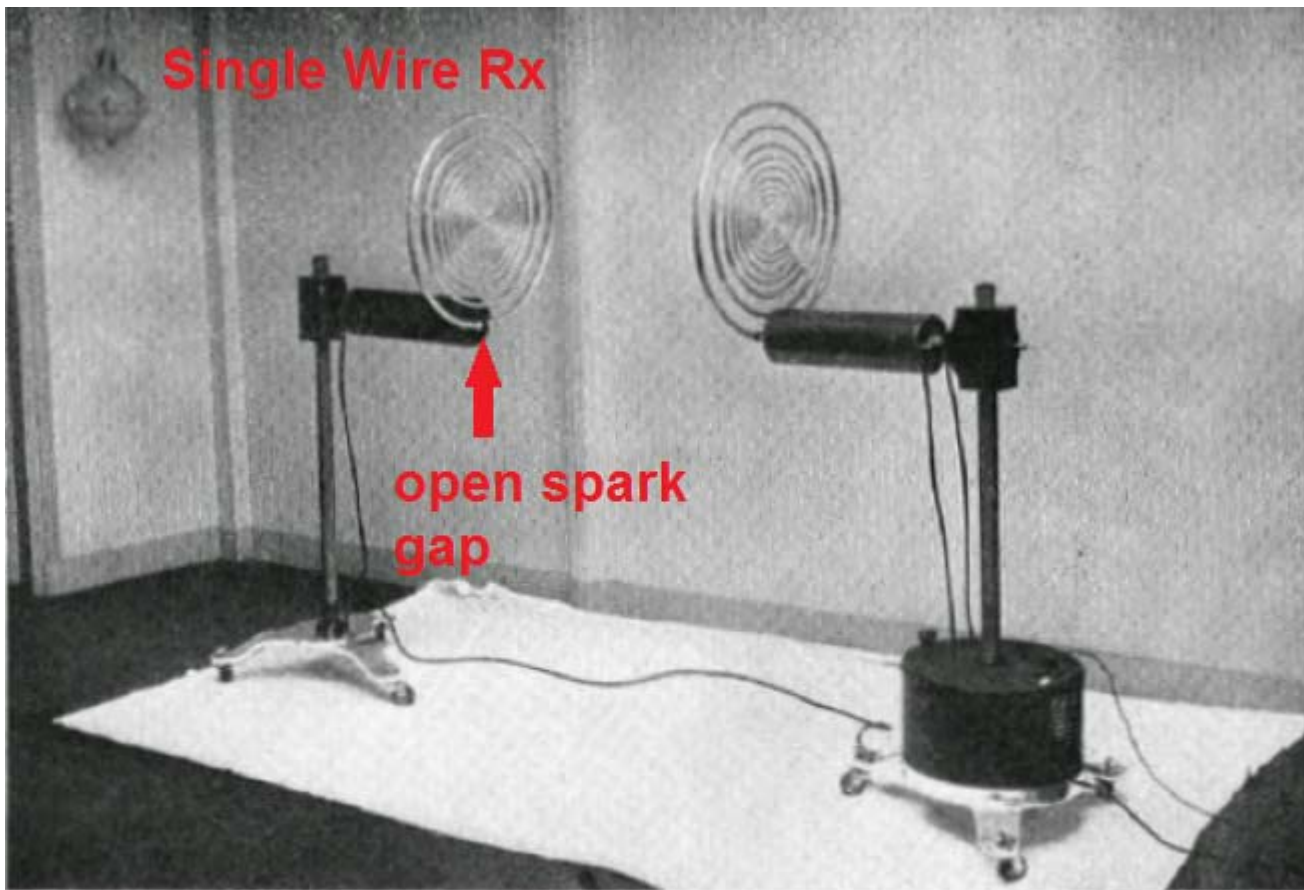


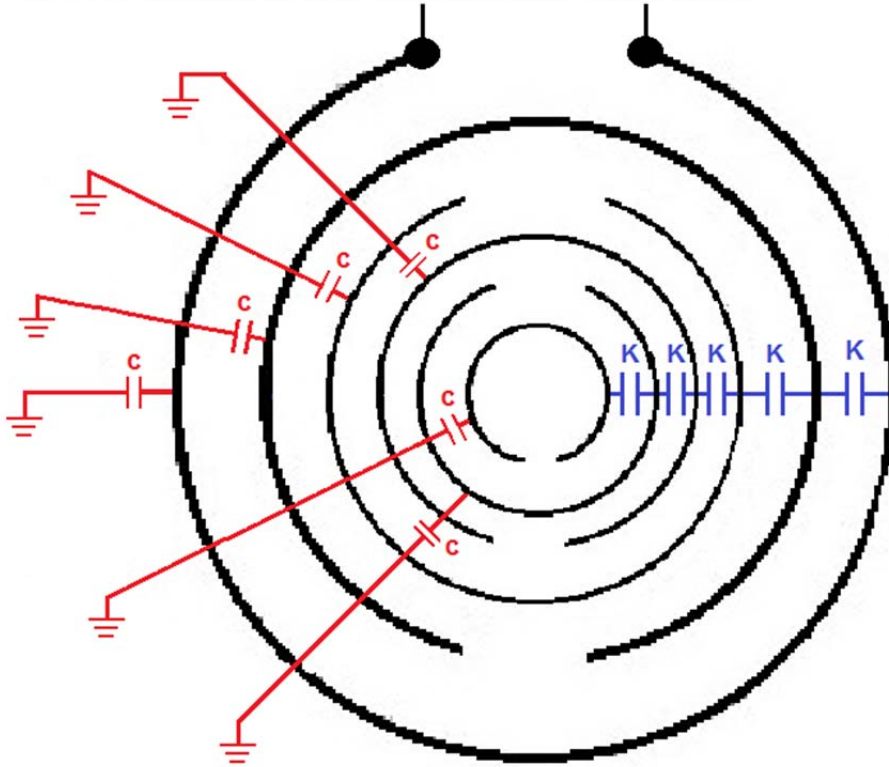
FIG. 13. — Oscillateur à ondes multiples. Appareil Lakhovsky complet avec ses deux résonateurs, créant un champ électromagnétique ambiant entre ses deux éléments.

Now for proof of the effects of having the receiving antenna at ground potential, lets take a look at the transmit antenna under high power. In the following picture the transmit antenna is receiving more power than it normally would, it would not normally produce corona at its edges. Take a look:



The purple-ish corona at the edges of the outer ring is high voltage on the antenna ionizing part of the air. What is ionizing the air is the displacement current, travelling to ground. The glow can be considered a partial arc, it ionizes some of the air on its way to ground, but not the whole path. What is interesting to note is the direction of the corona. The direction of the corona is the path of the dielectric flux. See how most of it is travelling straight down, to ground? It appears very little of the dielectric flux is travelling to the receiving antenna. The way this is wired, the dielectric flux will take the shortest path to ground.

Rings capacitively couple outside the antenna,
the surrounding environment is at ground potential



In the following diagram by **Eric**, he numbers the rings according to this convention:

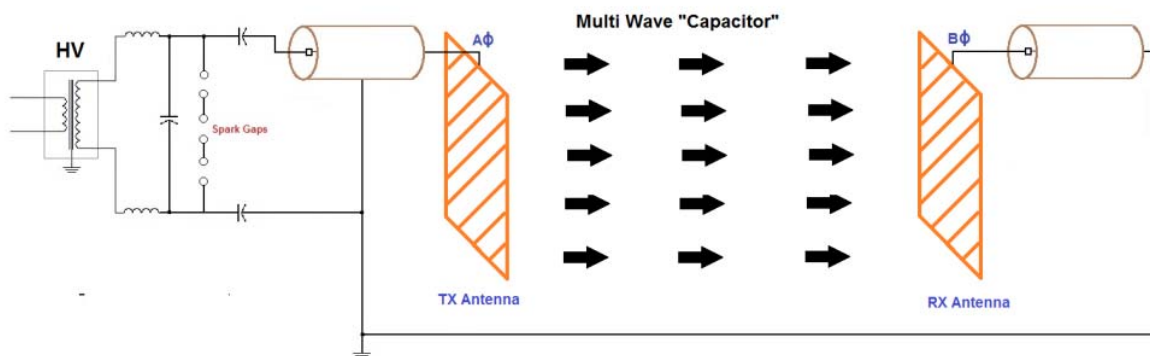








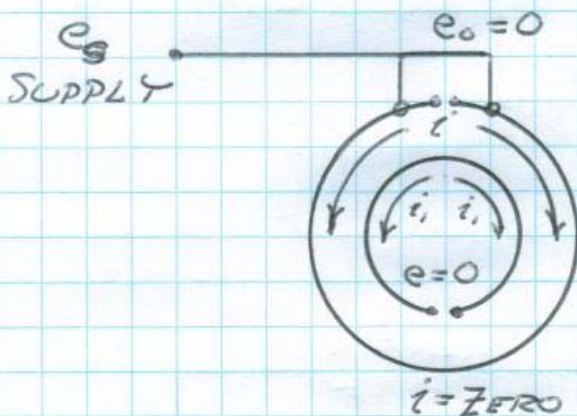
Not all of the antennas are of this design; there are antennas with an open outer ring as well. For the moment, let's look at just the ones with a closed outer ring. This would effectively put the entire antenna at one potential, there would be no frequencies emitted! There could be no magnemotive force through the outer ring. Only a displacement current would exist between the two antennas. In this case the antenna construction wouldn't matter; you might as well just use two plates of metal. The antennas just form a large capacitor! In this case a more apt name might be the "Multi-Wave Capacitor."



Here is a diagram by Eric assessing this situation:

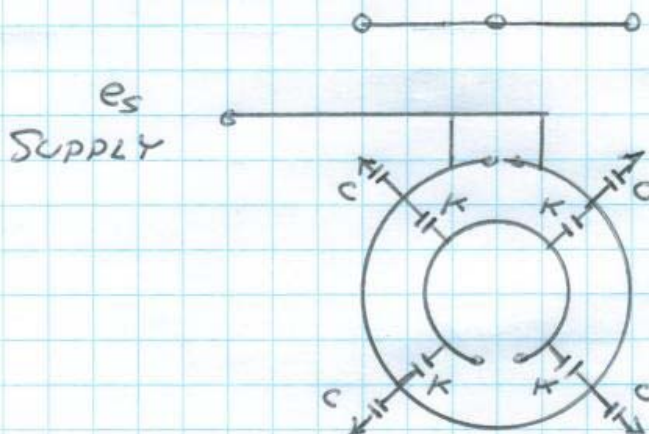
SINGLE TERMINAL
FEED, RING ANTENNA

OUTER SINGLE RING
SHIELDS INSIDE MULTIPLE
RINGS, SUPPRESSING A
MULTI-WAVE OSCILLATION



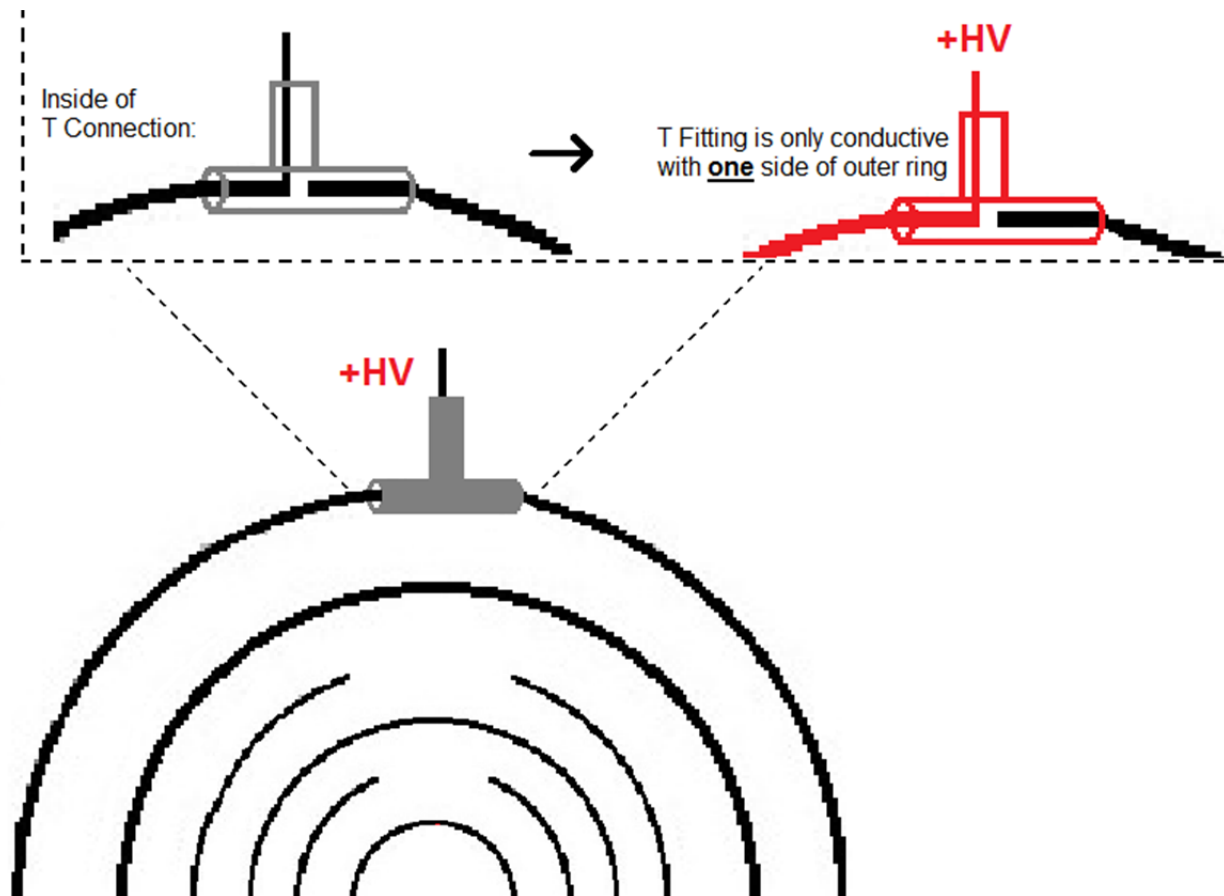
CURRENT WAVES
CANCEL, NO
MUTUAL
INDUCTION, NO
INDUCED E.M.F.

SINGLE TERMINAL
FEED, CANCELLATION

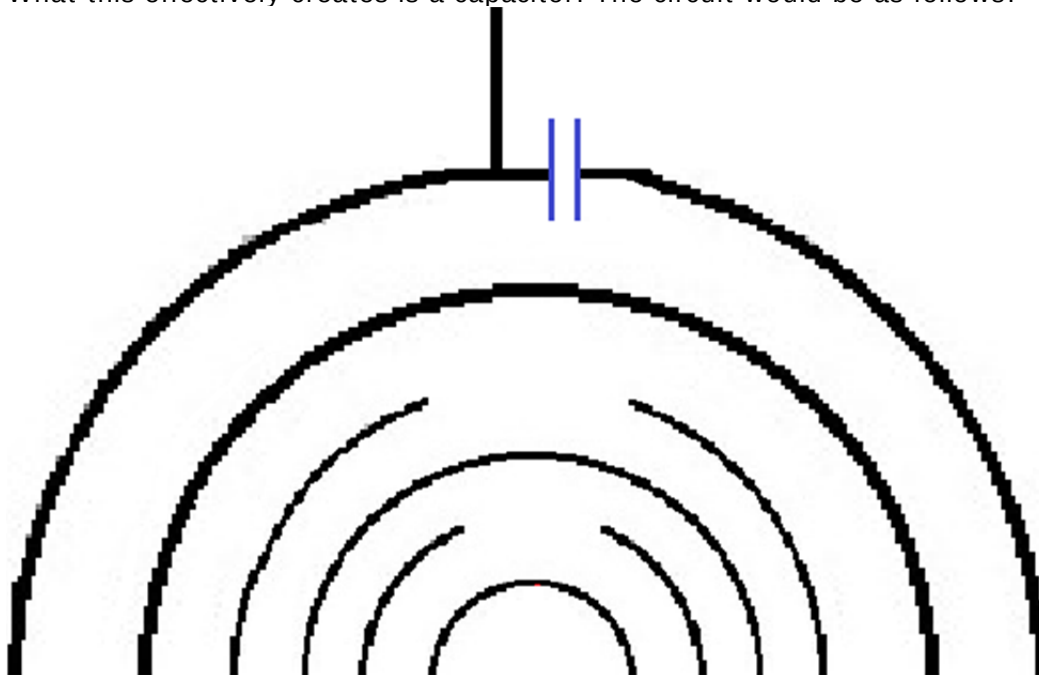


DIELECTRIC FLUX
DIRECTED OUTWARD

Looking at the researchers analysis of the original **MWO**, in the pdf noted in the beginning, the researchers noted that one side of the t-fitting was not conductive to the outer ring. That is, the outer ring did not appear to be shorted. There was some type of dielectric in between the outer ring and the t-fitting on one side. They surmised this might have been used to tune the antenna to be resonant to a particular frequency, 43 Mhz. A diagram illustrating the concept:



Still, there would only be a small amount of space in between the t-fitting and the insulated outer ring. What this effectively creates is a capacitor. The circuit would be as follows:

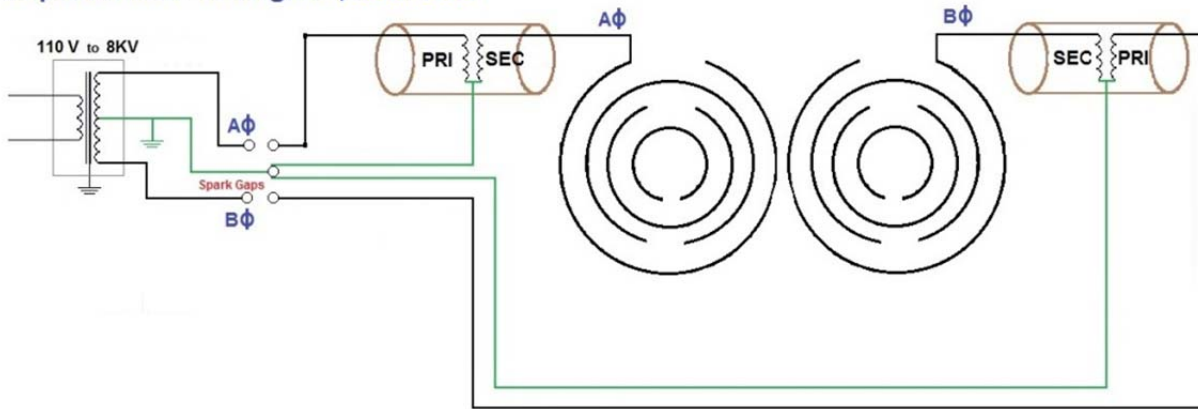


We all know a capacitor passes AC current, so the outer ring still could be considered “shorted” somewhat, suppressing a current around the outside ring.

Having looked at Lakhovsky’s original design, let’s take a look at what **Eric** originally thought Lakhovsky’s schematic was. He figured Lakhovsky was using a balanced setup, with each antenna being 180 degrees out of phase with relationship to each other, instead of the ground being

referenced:

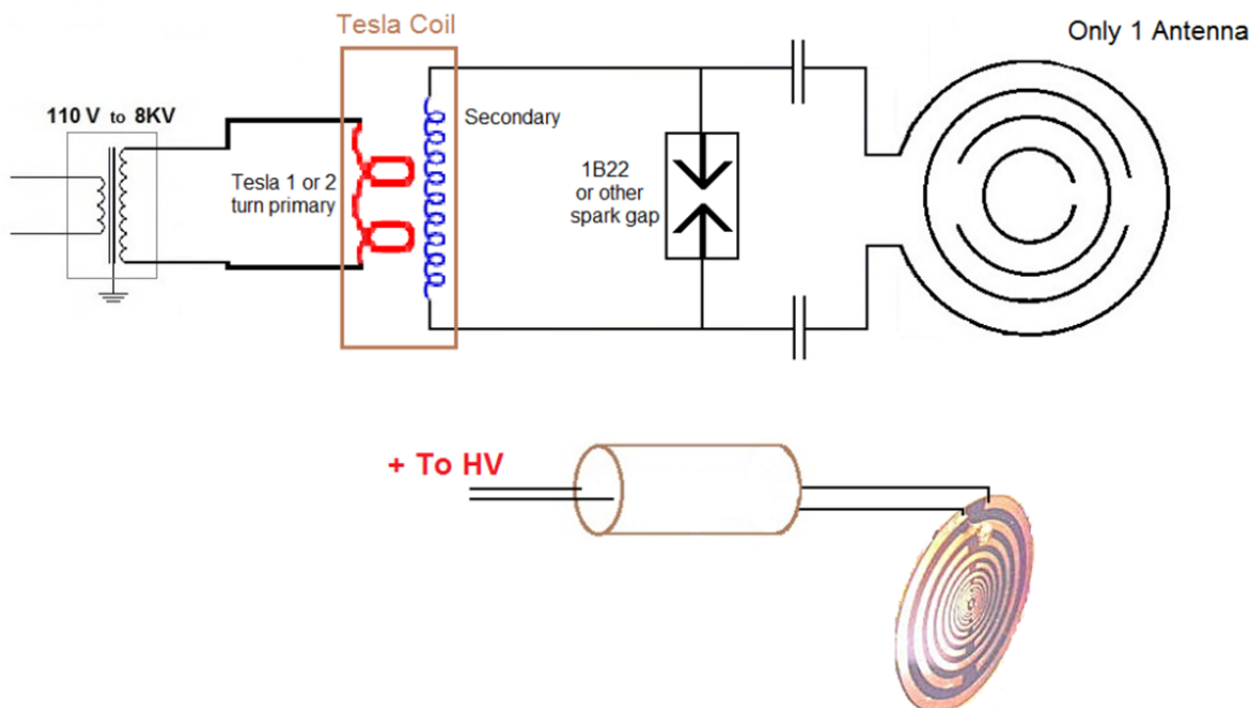
Improvement of original, balanced



This design forces all the dielectric flux to flow back and forth between antennas, instead of to the closest ground. Additionally, it would prevent the neutral wiring of your home from becoming a huge antenna.

Now it is time to examine what Eric's ideal version of what a multi-wave oscillator would be. This is Eric's design separate from Lakhovsky's work. To produce a true multi-wave oscillation, you need to produce a magnemotive force (current) in the outermost ring. So naturally the antenna would not be one wire connected, it would be connected on both ends:

Eric's Design:

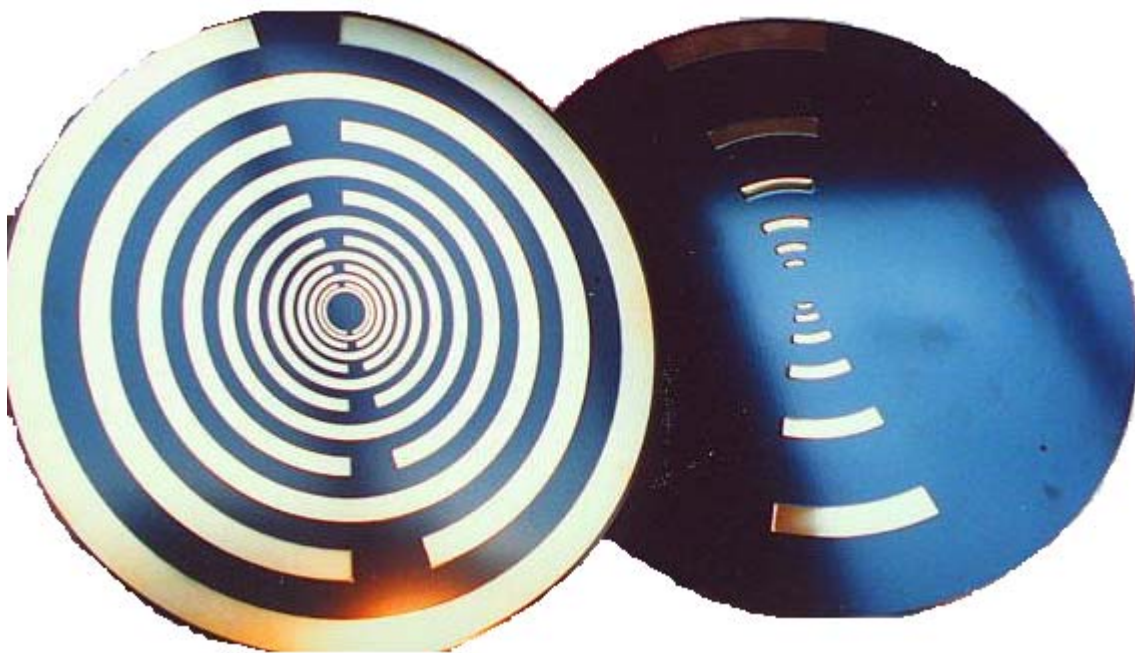


In this design you can get the most magnemotive force(current) flowing in the outer ring, which produces an EMF in the center rings through mutual induction. Each ring oscillates and transmits its own resonant frequency, thus having a true multi-wave, or multi-frequency effect. With this version there is no receive antenna, only one antenna is needed to transmit the multiple wavelength oscillations. This is the way to actually produce a multi-wave oscillation, if that is what Lakhovsky was after. Also the transmit antenna is not limited to producing the individual wavelengths of its component rings. Listed in the additional links section are a few videos, in one of the videos **Eric** talks about "phantom antennas". Note in the above picture the flat antenna is markedly different from the tubular

ring construction seen in Lakhovsky's originals, this is an original design by **Eric Dollard**.

Antenna Design

In Lakhovsky's antenna, the rings progress in diameter and spacing according to musical scales. Each ring corresponded to a particular note (which scale I'm not sure). **Eric** came up with a new design. He figured if the goal of the antenna was to preserve and stimulate life, what better progression could there be than that of life itself: the Golden Ratio. This is the "golden ruler" found in nature and the human body. The proportions of the golden ratio are what define this antenna. **Eric** figured it would be easiest to create this antenna on a circuit board, and just have it plated. Otherwise it is more difficult to get tubes and bend them perfectly, have the correct proportional spacing, suspend them with an appropriate dielectric, and have the correct cross sectional diameter of each tube (this has to be exact according to the geometric progression used as well). Where the Lakhovsky uses spheres at the ends of each ring to form a capacitance, **Eric** used strips on the back of the printed circuit board:



Ultimately, Eric's antenna didn't require power to have beneficial effects. A sort of interesting piece of evidence: Where he lived there was a cat that would always sleep directly on the antenna. **Eric** insists a more thorough investigation of its beneficial effects needs to be studied.

In summary, **Eric** says it is difficult to conclude what aspect of the original Lakhovsky Multi-Wave oscillator was producing beneficial healing effects. Was it the weakly generated multiple frequencies? Was it the displacement currents in between the two antennas? Was it the stray RF in the neutral wiring where the **MWO** was plugged in? It is hard to say. A more thorough study would be required in order to conclude what exactly is the cause of any healing effects. If the healing effects are indeed to multiple wavelength oscillations, he feels his design would perform remarkably better than Lakhovsky's original.

Additional Information:

Excerpt of an article written by Hessel Hoornveld, detailing his meeting with Serge Lakhovsky (George Lakhovsky's son) in 1993:

I have to agree with Serge that the original Lakhovsky **MWO** works as no other I know. Furthermore, its antenna is totally different to that used on other devices. Most use a Bergstresser or Beck antenna, this **MWO** works with hollow antenna rings, which are tuned. I confirmed that they were really tuned when I checked them using my electronic tuning device. When I tapped the second ring, my tuning device clearly indicated a C Sharp. The outermost ring is a fixed ring directly attached to the coil and is a C. The next ring is a C Sharp, the next a D and so on until the innermost ring, which is a C. In other words, a full octave complete with semitones. If we examine the tuned rings (sound therapy), they also correspond to the chakras (energy points on the body). C is the base chakra, D the sex chakra, E

the solar plexus chakra and so on.

Each antenna ring is made from a different metal. What the metals are was not revealed to me. When I asked why different metals were used, I was told by Serge that they were chosen in connection with the different planetary positions. Although I would not guarantee that I am right, I have taken a studied guess. The outermost ring, the C, is made of brass, the second ring, a C Sharp, of a light rustproof metal, the third of copper, the fourth of brass, the fifth of a light rustproof metal, the sixth of copper, the seventh of brass, the eighth of a light rustproof metal, the ninth of copper, tenth of brass, the eleventh of copper, the twelfth of a light rustproof metal, and the thirteenth of brass. There are bracing wires running from the innermost to the outermost ring, which keep the antenna rings the correct distance apart.

However, existing photographs of the **MWO** show antennas with different numbers of rings. I saw one with twelve rings, while Serge's **MWO** had thirteen with the innermost ring for the bracing wires. I do not know whether the thirteenth ring belongs to the antenna, but it seems very probable.

SECRECY

According to Serge, his father's **MWO** does not work when the moon is full, or when it is enclosed in a Faraday Cage. The rings of the antenna are held together by means of a string, and energy does not flow between them by conduction but by radiation. The antenna is thus capable of radiating gigantic quantities of energetic energy. The higher and more powerful the energetic field, the faster illnesses and degenerative processes are positively affected. The outermost ring, the C ring, is directly connected to the coil on both sides.

The reply to my request for a peek into the sanctum of the **MWO** was a definite no. Nevertheless, I hope that Serge will eventually give his permission because the technology involved is naturally of great interest to us all, and because I feel that his father's work should be open to the view of everyone who is open to it. It seems to me that Serge's fear that his father's techniques would be misused can be ruled out, for there are few people around today who are capable of dealing with this type of energy.

When Serge demonstrated the **MWO**, two spark gaps could be seen. There is a large coil behind each of the two antennas, which are brought into resonance with each other. The whole technique is based on oscillation and resonance!! The sound of the two spark gaps is very stable and serene. No sparks jump from one antenna ring to another, as occurs with the Bergstresser and Beck antennas. It's quite safe to come very close to the antenna rings with a car key, although sparks begin to jump continuously from a distance of about six centimeters. This does not cause an unpleasant sensation though. This indicates an extremely high voltage, high frequency and extremely rapid pulse behavior through the spark gap, and I suspect that the **MWO** contains a rotating mechanical spark gap.

The electricity needed to operate the **MWO** is supplied from a wall socket, which causes a fair degree of interference in the public electricity supply. This is something which was permitted in the past, but which is actually no longer allowed. Due to such interference, alarm systems, computers, answering machines and telephone systems etc. could suffer damage, or start to lead a life of their own. It was only possible to operate the **MWO** for a short period of time, about five minutes, or else it would overheat.

The device is grounded through the mains. It may be that this was done in order to enable the feed cable connected to the wall socket to be used as a (capacitor). This works even when an earth connection is not present.

Serge did not want to answer my question concerning the relationship between his father, George Lakhovsky, and Nikola Tesla; a brief silence followed. We know from available information that the two worked together, and that Tesla was also involved in the development of the **MWO**. Nikola Tesla had more than 1.000 patents to his name, and was the discoverer of alternating current, and induction motors.